



Dart Aerospace Ltd.
1270 Aberdeen St
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K6A 1K7
Canada

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D350-636-012
Job Sheet 190196



Part No: D350-636-012

Job Qty: 1 pcs

Part Name: AS350/355 - Skidtube - Float w/ Standard Wearplates - RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/5/19

Job Tracking No:

Due Date: 3/8/19

Created By: Jesse White

Type: Stock

Description: SIOP

Note: DWG D2750-042 REV.H IPP Rev:I 02.09.25 IPP Rev:J 06-03-23 As per Rev D IPP Rev:K 06-07.13 As per dsi9343 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC IPP Rev:M 08-04-22 DD verified:EC IPP Rev:N 08-09-23 revF DD verified:ec IPP Rev:O 09-02-06 per PAR09-010 DD verf:EC IPP Rev:P 10.06.22 revise seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH DDverf:EC IPP REV:R 13.08.27 PER ECN13-594 DD VERF:JLM IPP REV:S 18.11.12 AS PER DWG REV.H DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier Lead Time	
110	Skidtubes - 1	1 pcs		3/8/19	0.00	4.36	Skidtubes - 1	
							Skidtubes - 2	
							Skidtubes - 3	
							Skidtubes - 4	
							Skidtubes - 5	BF
							Skidtubes - 6	
							Skidtubes - 7	
120	QC 10	1 pcs		3/8/19	0.00	0.00	QC 10 - 10	
							QC 10 - 18	
							QC 10 - 24	
							QC 10 - 43	
							QC 10 - 50	
							QC 10 - 58	
							QC 10 - 9	PD 17.02.20
130	QC 5	1 pcs		3/8/19	0.00	0.00	QC 5 - 10	
							QC 5 - 12	
							QC 5 - 17	
							QC 5 - 18	
							QC 5 - 19	
							QC 5 - 22	
							QC 5 - 24	
							QC 5 - 3	
							QC 5 - 42	
							QC 5 - 43	
							QC 5 - 49	
							QC 5 - 51	
							QC 5 - 58	
							QC 5 - 68	



Container No: S153306



Part: D350-636-012

Job No: 190196

Serial No/Batch: S153306

Revision: H

Inspector:

Exp Date:

Instructions: TC STC SH99-7 Issue 2, FAA STC SR00646SI

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CANADA
TEL.: 1 613 632-6200
Email: sales@dartaero.com
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140	Handfinish - 1-1 Chemical-B4B	1 pcs	3/8/19	0.00 0.91	QC 5 - 9	19.02.20
					QC 5 - 50	
					QC 5 - 30	
					Handfinish - 1 - 1 - B4B	
					Handfinish - 1 - 2 - B4B	
					Handfinish - 1 - 3 - B4B	
					Handfinish - 1 - 4 - B4B	
					Handfinish - 1 - 5 - B4B	
					Handfinish - 1 - 6 - B4B	
					Handfinish - 1 - 7 - B4B	
					Handfinish - 1 - 8 - B4B	
					Handfinish - 1 - 9 - B4B	
					Handfinish - 1 - 10 - B4B	D.R 18/2/21
					Handfinish - 1 - 11 - B4B	
					Handfinish - 1 - 12 - B4B	
					Handfinish - 1 - 13 - B4B	
					Handfinish - 1 - 14 - B4B	
					Handfinish - 1 - 15 - B4B	
					Handfinish - 1 - 16 - B4B	
					Handfinish - 1 - 17 - B4B	
					Handfinish - 1 - 18 - B4B	
					Handfinish - 1 - 19 - B4B	
					Handfinish - 1 - 20 - B4B	
					Handfinish - 1 - 21 - B4B	
					Handfinish - 1 - 22 - B4B	
150	QC 7	1 pcs	3/8/19	0.00 0.00	QC 7 - 10	
					QC 7 - 13	
					QC 7 - 14	
					QC 7 - 15	
					QC 7 - 17	
					QC 7 - 18	BE
					QC 7 - 19	
					QC 7 - 2	
					QC 7 - 28	
					QC 7 - 3	
					QC 7 - 30	
					QC 7 - 34	
					QC 7 - 36	
					QC 7 - 37	
					QC 7 - 41	
					QC 7 - 47	
					QC 7 - 48	
					QC 7 - 51	
					QC 7 - 58	
					QC 7 - 59	
					QC 7 - 6	
					QC 7 - 60	
					QC 7 - 9	
					QC 7 - 68	
					QC 7 - 50	
					QC 7 - 67	
160	Skidtubes - 2 - B4B	1 pcs	3/8/19	0.00 4.36	Skidtubes - 1 - B4B	00
					Skidtubes - 2 - B4B	
					Skidtubes - 3 - B4B	
					Skidtubes - 4 - B4B	
					Skidtubes - 5 - B4B	BE
					Skidtubes - 6 - B4B	
					Skidtubes - 7 - B4B	
170	QC 10	1	3/8/19	0.00 0.00	QC 10 - 10	

pcs

180 QC 5	1 pcs	3/8/19	0.00 0.00	QC 10 - 18	PD 19-03-01
				QC 10 - 24	
				QC 10 - 43	
				QC 10 - 50	
				QC 10 - 58	
				QC 10 - 9	
				QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
190 Handfinish - 2-1 Pressure-B4B	1 pcs	3/8/19	0.00 0.91	QC 5 - 19	PD 19-03-01
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
200 Spray Paint - 2 - B4B	1 pcs	3/8/19	0.00 0.69	QC 5 - 9	DR 19/03/04
				QC 5 - 50	
				QC 5 - 30	
				Handfinish - 2 - 1 - B4B	
				Handfinish - 2 - 2 - B4B	
				Handfinish - 2 - 3 - B4B	
				Handfinish - 2 - 4 - B4B	
				Spray Paint - 1 - B4B	
				Spray Paint - 2 - B4B	
				Spray Paint - 3 - B4B	
205 Outsource	1 pcs	3/8/19	0.00 0.00	Spray Paint - 4 - B4B	NR
				ATE003-VC	
				QC 14 - 15	
				QC 14 - 2	
				QC 14 - 34	
				QC 14 - 41	
				QC 14 - 51	
				QC 14 - 58	
				QC 14 - 59	
				QC 14 - 9	
210 QC 14	1 pcs	3/8/19	0.00 0.00	QC 14 - 68	M 19-3-22
				Handfinish - 4 - 1 - B4B	
				Handfinish - 4 - 10 - B4B	
				Handfinish - 4 - 11 - B4B	
				Handfinish - 4 - 12 - B4B	
				Handfinish - 4 - 13 - B4B	
				Handfinish - 4 - 14 - B4B	
				Handfinish - 4 - 15 - B4B	
				Handfinish - 4 - 2 - B4B	
				Handfinish - 4 - 3 - B4B	
230 Handfinish - 4-1-Assembly-B4B	1 pcs	3/8/19	0.00 0.91	Handfinish - 4 - 4 - B4B	M 19-3-22
				Handfinish - 4 - 5 - B4B	
				Handfinish - 4 - 6 - B4B	
				Handfinish - 4 - 7 - B4B	
				Handfinish - 4 - 8 - B4B	
				Handfinish - 4 - 9 - B4B	
				QC 5 - 10	
				QC 5 - 12	
240 QC 5	1 pcs	3/8/19	0.00 0.00		

				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
250	Packaging 1-1 - Pick Kit - B4B	1 pcs	3/8/19	0.00 0.00	Packaging 1 - 1 - B4B
					Packaging 1 - 2 - B4B
					Packaging 1 - 3 - B4B
					Packaging 1 - 4 - B4B
					Packaging 1 - 5 - B4B
					Packaging 1 - 6 - B4B
					Packaging 1 - 7 - B4B
					Packaging 1 - 8 - B4B
					Packaging 1 - 9 - B4B
					Packaging 1 - 10 - B4B
					Packaging 1 - 11 - B4B
					Packaging 1 - 12 - B4B
					Packaging 1 - 13 - B4B
					Packaging 1 - 14 - B4B
					Packaging 1 - 15 - B4B
					Packaging 1 - 16 - B4B
					Packaging 1 - 17 - B4B
					Packaging 1 - 18 - B4B
					Packaging 1 - 19 - B4B
					Packaging 1 - 20 - B4B
					Packaging 1 - 21 - B4B
					Packaging 1 - 22 - B4B
					Packaging 1 - 23 - B4B
					Packaging 1 - 24 - B4B
					Packaging 1 - 25 - B4B
					Packaging 1 - 26 - B4B
					Packaging 1 - 27 - B4B
					Packaging 1 - 28 - B4B
					Packaging 1 - 29 - B4B
					Packaging 1 - 30 - B4B
					Packaging 1 - 31 - B4B
					Packaging 1 - 32 - B4B
					Packaging 1 - 33 - B4B
					Packaging 1 - 34 - B4B
					Packaging 1 - 35 - B4B
					Packaging 1 - 36 - B4B
260	QC 4	1 pcs	3/8/19	0.00 0.00	QC 4 - 26
					QC 4 - 28
					QC 4 - 42
					QC 4 - 58
					QC 4 - 6
					QC 4 - 69
					QC 4 - 9
					QC 4 - 46

DAS
APR 01 2019 68
9-89

APR 02 2019

DAS
46 APR 02 2019
9-89

270 Packaging 3-1 - Stock - B4B

1

pcs

3/8/19

0.00 0.00

Packaging 3 - 1 - B4B

Packaging 3 - 2 - B4B

Packaging 3 - 3 - B4B

Packaging 3 - 4 - B4B

Packaging 3 - 5 - B4B

Packaging 3 - 6 - B4B

Packaging 3 - 7 - B4B

Packaging 3 - 8 - B4B

Packaging 3 - 9 - B4B

Packaging 3 - 10 - B4B

Packaging 3 - 11 - B4B

Packaging 3 - 12 - B4B

Packaging 3 - 13 - B4B

Packaging 3 - 14 - B4B

Packaging 3 - 15 - B4B

Packaging 3 - 16 - B4B

Packaging 3 - 17 - B4B

Packaging 3 - 18 - B4B

Packaging 3 - 19 - B4B

Packaging 3 - 20 - B4B

Packaging 3 - 21 - B4B

Packaging 3 - 22 - B4B

Packaging 3 - 23 - B4B

Packaging 3 - 24 - B4B

Packaging 3 - 25 - B4B

Packaging 3 - 26 - B4B

Packaging 3 - 27 - B4B

Packaging 3 - 28 - B4B

Packaging 3 - 29 - B4B

Packaging 3 - 30 - B4B

Packaging 3 - 31 - B4B

Packaging 3 - 32 - B4B

Packaging 3 - 33 - B4B

Packaging 3 - 34 - B4B

Packaging 3 - 35 - B4B

Packaging 3 - 36 - B4B

DAS

46

APR 02 2019

9-89

275 DC - 1 - B4B

1

pcs

3/8/19

0.00 0.00

DC - 1 - B4B

DC - 2 - B4B

DC - 21 - FG - 21

DC - 21 - FG - 70

DC - 21 - FG - 53

DAS

21

APR 02 2019

280 QC 21 - FG

1

pcs

3/8/19

0.00 0.00

QC 21 - FG - 21

QC 21 - FG - 70

QC 21 - FG - 53

DAS

21

APR 02 2019

Part Op 110 - (Skid tubes) 1- Pick D2600-3 Bent Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE. 6- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297". 7- Open up holes of Detail J to 0.297" (total of 2 holes per side) 8- Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004 9- Grind welds flush as per Dwg D2750 *AK 138989*

120 - (QC10- Inspect visual per QSI004- ground welds)

130 - (QC5- Inspect part completeness to step on W/O)

140 - (Chemical Conversion Coat per QSI005 4.1)

150 - (QC7-Inspect Chemical Conversion Coat)

160 - (Skid tubes) 1- Open up holes of Detail L using hole saw and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750. 2- Open up holes of Detail K using hole saw to 0.750" (total of 4 holes per side) as per dwg D2750. 3- Open float holes using uni-bit to .500" (4 per Side) 4- Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9) 5- Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7- Bond web D2739 in place as per QSI 015. let cure for 12hrs. A/R Sikaflex-291 batch: *7138989* exp. date: *03/20/19***ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)** 8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9) A/R Aluminum Rod batch: *1138989* 9- At section AP-AP drill out x-bolt spacer to 0.404" 10-Grind welds flush as per Dwg D2750 11- Spot face ground handling holes section (total of 4 places per side) as per dwg D2750 12- Deburr holes, ensure tube is free of all scratches before sending to paint.

170 - (QC10- Inspect visual per QSI004- ground welds)

180 - (QC5- Inspect part completeness to step on W/O) ***VERIFY C'BOARD IS GOOD***

2AC
20
8-05

*190 - (Pressure Wash per QSI005 4.3/ Clean and remove all markings) Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.
 200 - (Spray Paint / NDT Room) 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349
 BATCH: 5152590 2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: 5146086
 210 - (QC14- Inspect Spray Paint) Inspect for foreign object per QSI 024
 230 - (Assemble as per dwg) 1-Install inserts as per dwg D2750 2-Inspect for Foreign Objects 3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750 SIKAFLEX 241 BATCH: 516344 EXP
 DATE: 14-4 4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: 5138847 5-Coat all exposed fasteners with "LPS Procyon" batch: 5133690
 240 - (QC5- Inspect part completeness to step on W/O)
 250 - (Pick Kit)
 260 - (QC4- 100% Inspect kits for completeness)
 270 - (Identify as per dwg & Stock Location: 898) Package as per PPP D350-636-012
 275 - (Document Control) record fwd angle: 898 Photocopy blue file and type labels per PPP D350-636-012
 CHG 008
 280 - (QC21- Final Inspection - Work Order Release)

Job BOM

000010

Part / Item	Component Name	Quantity	Operation	Container
D2600-3-BENT-RH	Extrusion Bent RH	1 pcs (1 ea)	110-Skidtubes - 1	5129559
D2744	Cap	1 pcs (1 ea)	110-Skidtubes - 1	5130291
D2739	350 I-Beam	1 pcs (1 ea)	160-Skidtubes - 2 - B4B	5153407
D2743	Crossbolt Spacer	8 pcs (8 ea)	160-Skidtubes - 2 - B4B	5156521
D3490-1	Cross Bolt Spacer	4 pcs (4 ea)	160-Skidtubes - 2 - B4B	5133798
D3490-3	Cross Bolt Spacer	4 pcs (4 ea)	160-Skidtubes - 2 - B4B	5107802
ALS4-1032-225	Rivnut	38 Ea (38 ea)	230-Handfinish - 4-1-Assembly-B4B	5059809
AN3C5A	Bolt	34 Ea (34 ea)	230-Handfinish - 4-1-Assembly-B4B	5149186
AN3C6A	Bolt	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5142453
AN6C44A	Bolt	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5149182
AN8C35A	Bolt	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5142143
D2745	Bushing	8 Ea (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5137492
D3488-4	Blade Fitting, RH	1 pcs (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5142185
D3492-1	Plug	8 pcs (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5148524
D3492-3	Plug	8 pcs (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5137512
D3537-1	Wearpad	3 pcs (3 ea)	230-Handfinish - 4-1-Assembly-B4B	X 5156312
D3631-1	Washer	8 pcs (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5058407
D3791-1	Wearpad	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	X 5142090
D3793-1	Wearplate Fwd	1 pcs (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5141967
D3793-3	Wearplate Aft	1 pcs (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5132951
MS21043-6	Nut	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5149193
MS21083C8	Nut	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5104048
NAS1149C0332R	Washer	38 Ea (38 ea)	230-Handfinish - 4-1-Assembly-B4B	5148665X20
NAS1149C0832R	Washer	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5076017-2
NAS1515H3L	Washer	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5083559
NAS1611-010	O-Ring	8 Ea (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5106792
NAS1611-013	O-Ring	8 Ea (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5106791
D3793-5	Wearpad	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5132649
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging 1-1 - Pick Kit - B4B	5093793X1 5156680X1
D2741	Replacement Blade	1 pcs (1 ea)	250-Packaging 1-1 - Pick Kit - B4B	5129315
D3493-1	Washer	2 pcs (2 ea)	250-Packaging 1-1 - Pick Kit - B4B	5125813
D3532-1	Spacer	2 pcs (2 ea)	250-Packaging 1-1 - Pick Kit - B4B	5090421
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging 1-1 - Pick Kit - B4B	5152948
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging 1-1 - Pick Kit - B4B	5133789

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
110-Skidtubes - 1	D2600-3-BENT-RH	1	4	0
	D2744	1	40	0
160-Skidtubes - 2 - B4B	D2739	1	13	0
	D2743	8	8	0
	D3490-1	4	23	0
	D3490-3	4	33	0
	ALS4-1032-225	38	1,010	0
230-Handfinish - 4-1-Assembly-B4B	AN3C5A	34	1,119	0
	AN3C6A	4	172	0
	AN6C44A	4	101	0
	AN8C35A	1	30	0
	D2745	8	106	0
	D3488-4	1	8	0
	D3492-1	8	109	0
	D3492-3	8	96	0
	D3537-1	3	67	0
	D3631-1	8	301	0
	D3791-1	1	12	0
	D3793-1	1	17	0
	D3793-3	1	13	0
	D3793-5	1	8	0
	MS21043-6	4	155	0
	MS21083C8	1	45	0
	NAS1149C0332R	38	4,629	0
	NAS1149C0832R	1	351	0
	NAS1515H3L	4	402	0
	NAS1611-010	8	459	0
	NAS1611-013	8	132	0
250-Packaging 1-1 - Pick Kit - B4B	AN8C21A	2	53	0
	D2741	1	48	0
	D3493-1	2	27	0
	D3532-1	2	19	0
	MS21083C8	2	45	0
	NAS1149D0863J	2	125	0
Part Specifications				
Specifications could not be found.				

Plex 2/12/19 11:22 AM Dart.Hadley.Shannon



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D350-636-012
Job Sheet 190196



Part No: D350-636-012

Job Qty: 1 ea

Part Name: AS350/355 - Skidtube - Float w/ Standard Wearplates - RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/5/19

Job Tracking No:

Due Date: 3/8/19

Created By: Jesse White

Type: Stock

Description: SIOP

Note: DWG D2750-042 REV.H IPP Rev:I 02.09.25 IPP Rev:J 06-03-23 As per Rev D IPP Rev:K 06-07.13 As per dsi9343 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC IPP Rev:M 08-04-22 DD verified:EC IPP Rev:N 08-09-23 revF DD verified:ec IPP Rev:O 09-02-06 per PAR09-010 DD verf:EC IPP Rev:P 10.06.22 revise seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH DDverf:EC IPP REV:R 13.08.27 PER ECN13-594 DD VERF:JLM IPP REV:S 18.11.12 AS PER DWG REV.H DD VERF:JFS

Ship Via:

Bill of Materials

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		3/8/19	0.00	0.00	Start Up Skid tubes-1		
110	Skid tubes	1 pcs		3/8/19	0.00	4.36	Skid tubes-4		
120	QC	1 pcs		3/8/19	0.00	0.00	QC10		
130	QC	1 pcs		3/8/19	0.00	0.00	QC5		
140	HandFinish	1 pcs		3/8/19	0.00	0.91	HandFinish1		
150	QC	1 pcs		3/8/19	0.00	0.00	QC7-2		
160	Skid tubes	1 pcs		3/8/19	0.00	4.36	Skid tubes-1		
170	QC	1 pcs		3/8/19	0.00	0.00	QC10		
180	QC	1 pcs		3/8/19	0.00	0.00	QC5		
190	HandFinish	1 pcs		3/8/19	0.00	0.91	HandFinish2		
200	SprayPaint	1 pcs		3/8/19	0.00	0.69	Spray Paint		
205	Outsource	1 pcs		3/8/19			ATE003-VC	5	
210	QC	1 pcs		3/8/19	0.00	0.00	QC14		
230	HandFinish	1 pcs		3/8/19	0.00	0.91	HandFinish4		
240	QC	1 pcs		3/8/19	0.00	0.00	QC5		
250	Packaging	1 pcs		3/8/19	0.00	0.00	Packaging1-3		
260	QC	1 pcs		3/8/19	0.00	0.00	QC4		
270	Packaging	1 pcs		3/8/19	0.00	0.00	Packaging3-1		
275	DC	1 pcs		3/8/19	0.00	0.00	DC		
280	QC21-FG	1 Ea		3/8/19	0.00	0.00	QC21		

Part Op 110 - 1- Pick D2600-3 Bent Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & Descriptions: DT8863A for second side only DT8863B for first side (detail K) 4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE. 6- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297". 7- Open up holes of Detail J to 0.297" (total of 2 holes per side) 8- Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004 9- Grind welds flush as per Dwg D2750

160 - 1- Open up holes of Detail L using hole saw and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750. 2- Open up holes of Detail K using hole saw to 0.750" (total of 4 holes per side) as per dwg D2750. 3- Open float holes using uni-bit to .500" (4 per Side) 4- Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9) 5- Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7- Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R Sikaflex-291 batch: _____ exp. date: _____ **ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)*** 8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9) A/R Aluminum Rod batch: _____ 9- At section AP-AP drill out x-bolt spacer to 0.404" 10-Grind welds flush as per Dwg D2750 11- Spot face ground handling holes section (total of 4 places per side) as per dwg D2750 12- Deburr holes, ensure tube is free of all scratches before sending to paint.

180 - ***VERIFY C'BOARD IS GOOD***

190 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: _____ 2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: _____

210 - Inspect for foreign object per QSI 024

230 - 1-Install inserts as per dwg D2750 2-Inspect for Foreign Objects 3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750 SIKA FLEX 241 BATCH: _____ EXP DATE: _____ 4-

assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: _____ 5-Coat all exposed fasteners with "LPS Procyon" batch: _____

270 - Package as per PPP D350-636-012

275 - record fwd angle: _____ Photocopy blue file and type labels per PPP D350-636-012 CHG 008

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Eng. (Non-AW) ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Water Jet ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Supplier Quality ☐</td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Eng. (Non-AW) ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Water Jet ☐	Large Fab ☐	Finishing ☐	Rec/Store/Packaging ☐	Supplier Quality ☐																																
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Other/Details:																																																	

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2600-3-BENT-RH	Extrusion Bent RH	1 pcs (1 ea)	90-Start up Operation	
D2744	Cap	1 pcs (1 ea)	110-Skidtubes	
D2739	350 I-Beam	1 pcs (1 ea)	160-Skidtubes	
D2743	Crossbolt Spacer	8 pcs (8 ea)	160-Skidtubes	
D3490-1	Cross Bolt Spacer	4 pcs (4 ea)	160-Skidtubes	
D3490-3	Cross Bolt Spacer	4 pcs (4 ea)	160-Skidtubes	
ALS4-1032-225	Rivnut	38 Ea (38 ea)	230-HandFinish	
AN3C5A	Bolt	34 Ea (34 ea)	230-HandFinish	
AN3C6A	Bolt	4 Ea (4 ea)	230-HandFinish	
AN6C44A	Bolt	4 Ea (4 ea)	230-HandFinish	
AN8C35A	Bolt	1 Ea (1 ea)	230-HandFinish	
D2745	Bushing	8 Ea (8 ea)	230-HandFinish	
D3488-4	Blade Fitting, RH	1 pcs (1 ea)	230-HandFinish	
D3492-1	Plug	8 pcs (8 ea)	230-HandFinish	
D3492-3	Plug	8 pcs (8 ea)	230-HandFinish	
D3537-1	Wearpad	3 pcs (3 ea)	230-HandFinish	
D3631-1	Washer	8 pcs (8 ea)	230-HandFinish	
D3791-1	Wearpad	1 Ea (1 ea)	230-HandFinish	
D3793-1	Wearplate Fwd	1 pcs (1 ea)	230-HandFinish	
D3793-3	Wearplate Aft	1 pcs (1 ea)	230-HandFinish	
MS21043-6	Nut	4 Ea (4 ea)	230-HandFinish	
MS21083C8	Nut	1 Ea (1 ea)	230-HandFinish	
NAS1149C0332R	Washer	38 Ea (38 ea)	230-HandFinish	
NAS1149C0832R	Washer	1 Ea (1 ea)	230-HandFinish	
NAS1515H3L	Washer	4 Ea (4 ea)	230-HandFinish	
NAS1611-010	O-Ring	8 Ea (8 ea)	230-HandFinish	
NAS1611-013	O-Ring	8 Ea (8 ea)	230-HandFinish	
D3793-5	Wearpad	1 Ea (1 ea)	230-HandFinish	
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging	
D2741	Replacement Blade	1 pcs (1 ea)	250-Packaging	
D3493-1	Washer	2 pcs (2 ea)	250-Packaging	
D3532-1	Spacer	2 pcs (2 ea)	250-Packaging	
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging	
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

* NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042) _____	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details: _____					

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2600-3-BENT-RH	1	5	0
	D2744	1	40	0
	D2739	1	3	0
110-Skidtubes	D2743	8	8	0
	D3490-1	4	23	0
	D3490-3	4	33	0
160-Skidtubes	ALS4-1032-225	38	709	0
	AN3C5A	34	1,119	0
	AN3C6A	4	172	0
230-HandFinish	AN6C44A	4	101	0
	AN8C35A	1	30	0
	D2745	8	106	0
	D3488-4	1	9	0
	D3492-1	8	109	0
	D3492-3	8	96	0
	D3537-1	3	85	0
	D3631-1	8	301	0
	D3791-1	1	12	0
	D3793-1	1	17	0
	D3793-3	1	13	0
	D3793-5	1	8	0
	MS21043-6	4	171	0
	MS21083C8	1	47	0
	NAS1149C0332R	38	5,027	0
	NAS1149C0832R	1	351	0
	NAS1515H3L	4	402	0
	NAS1611-010	8	459	0
	NAS1611-013	8	132	0
	AN8C21A	2	55	0
	D2741	1	49	0
250-Packaging	D3493-1	2	27	0
	D3532-1	2	19	0
	MS21083C8	2	47	0
	NAS1149D0863J	2	125	0

Part Specifications

Specifications could not be found.

Plex 2/5/19 3:05 PM dart.white.jesse

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

QTY -041	QTY -042	QTY -043	QTY -044	QTY -051	QTY -052	P/N	DESCRIPTION
X						D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X					D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X				D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X			D2750-044	350 SKIDTUBE ASSEMBLY, RH
				X		D2750-051	350 SKIDTUBE ASSEMBLY, LH
					X	D2750-052	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	1	1	D2739	WEB
8	8	8	8	8	8	D2743	CROSS BOLT SPACER
1	1	1	1	1	1	D2744	CAP
8	8	8	8	8	8	D2745	BUSHING
1						D2750-1	350 SKIDTUBE ASSEMBLY
	1					D2750-2	350 SKIDTUBE ASSEMBLY
		1				D2750-3	350 SKIDTUBE ASSEMBLY
			1			D2750-4	350 SKIDTUBE ASSEMBLY
				1		D2750-5	350 SKIDTUBE ASSEMBLY
					1	D2750-6	350 SKIDTUBE ASSEMBLY
1		1		1		D3488-3	BLADE FITTING, LH
	1		1		1	D3488-4	BLADE FITTING, RH
4	4	4	4			D3490-1	CROSS BOLT SPACER
4	4					D3490-3	CROSS BOLT SPACER
		4	4			D3490-5	CROSS BOLT SPACER
8	8	8	8			D3492-041	PLUG
8	8					D3492-043	PLUG
		8	8			D3492-045	PLUG
3	3	3	3	3	3	D3537-1	WEARPAD
8	8	8	8	8	8	D3631-1	WASHER
1	1	1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	1	1	D3793-5	WEARSHOE
38	38	38	38	38	38	ALS4-1032-225	INSERT
				1	1	AN3C34A	BOLT
34	34	34	34	34	34	AN3C5A	BOLT
4	4	4	4	4	4	AN3C8A	BOLT
4	4	4	4	4	4	AN6C44A	BOLT
1	1	1	1	1	1	AN8C35A	BOLT
				1	1	MS21043-3	NUT
4	4	4	4	4	4	MS21043-6	NUT
1	1	1	1	1	1	MS21083C8	NUT
38	38	38	38	38	38	NAS1149C0332R	WASHER
				2	2	NAS1149C0363R	WASHER
1	1	1	1	1	1	NAS1149C0832R	WASHER
4	4	4	4	4	4	NAS1515H3L	WASHER

NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4/-5/-6 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB. STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2 OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.1 lbs
D2750-051/-052 = 25.7 lbs
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 19/64" SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF FINISH WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

H	ADDED -051/-052 (ZN D5-1 SHEETS 4, 15-16); ADDED D2750-5/-6 (ZN C5-1 SHEETS 9, 10); D3488-3/-4 REPLACES D3488-041/-042 (ZN C5-1, D2-11/-12/-13/-14); D3793-5 REPLACES D3535-25 (ZN B6-1, C4-11/-12/-13/-14); NAS1149C0332R REPLACES AN860C10L (ZN A5-1, B1-11/-12/-13/-14, C7-11/-12/-13/-14); NAS1149C0832R REPLACES AN860C816L (ZN A5-1, C1-11/-12/-13/-14); REMOVED D3794-1/-3, AND D3536-25 GASKETS	ZF	18.03.05
G	CORRECTED TOLERANCE ON $\phi 0.500$ THRU HOLE: IS +0.01/-0.000, WAS +0.100/-0.000 (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1-4/-5/-6/-7); UPDATED FINISH OPTIONS; INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PAR13-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL); WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H3L; REMOVE D2741; QTY (2) AN860C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	MM		
DRAWN	ZF		
CHECKED	MW	DART AEROSPACE USA, INC.	REV. H
MFG. APPR.	DD	EUGENE, OR	SHEET 1 OF 16
APPROVED	NO	D2750	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.05		

RELEASED

2018 OCT 19
2018-03-05

APPROVED

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

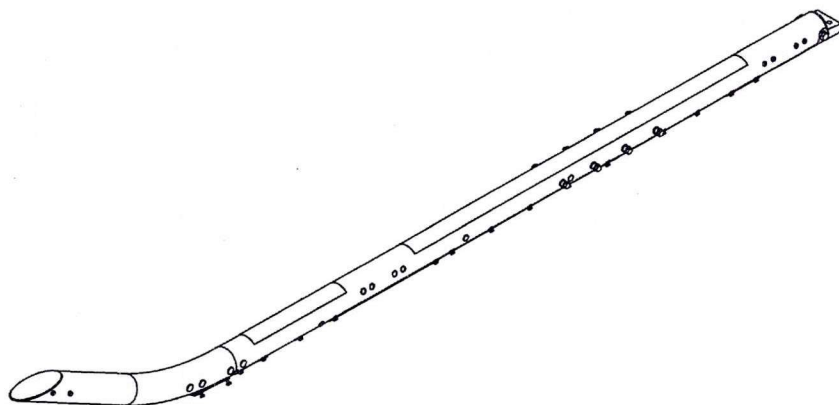
8 7 6 5 4 3 2 1

D

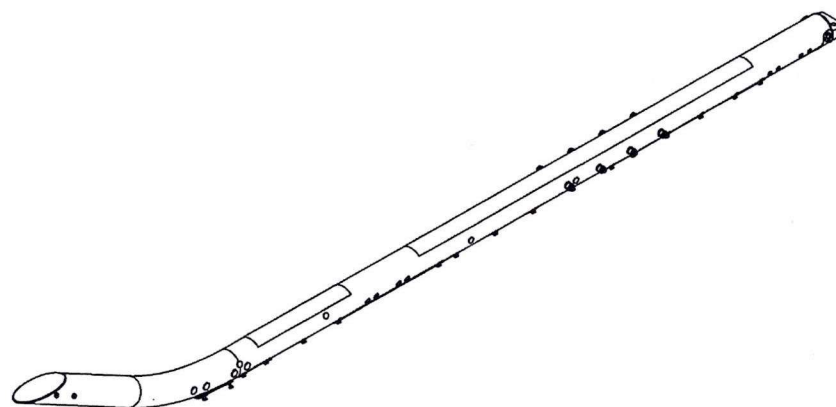
C

B

A



D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED

2018 OCT 19
2018 10 19

APPROVED

DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 2 OF 18
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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8 7 6 5 4 3 2 1

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only ☐

NCR No. _____

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

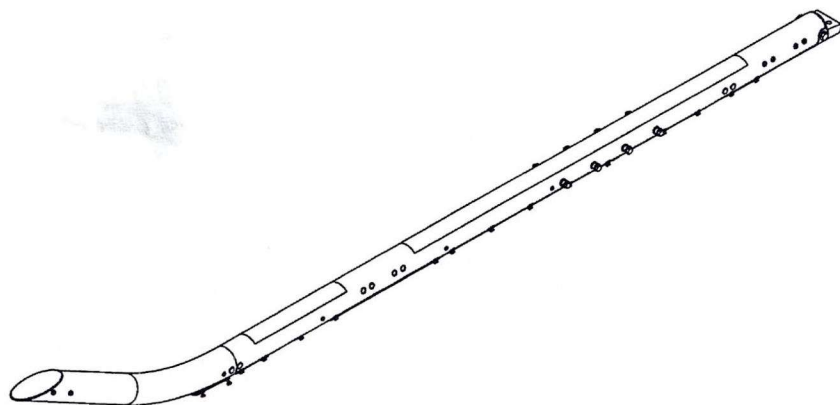
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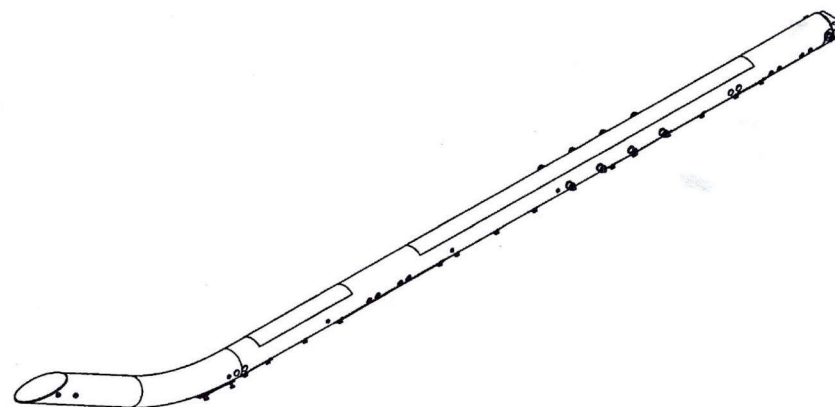
C

B

A



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

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2018 OCT 19

APPROVED

DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 3 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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Entered: _____ Date: _____

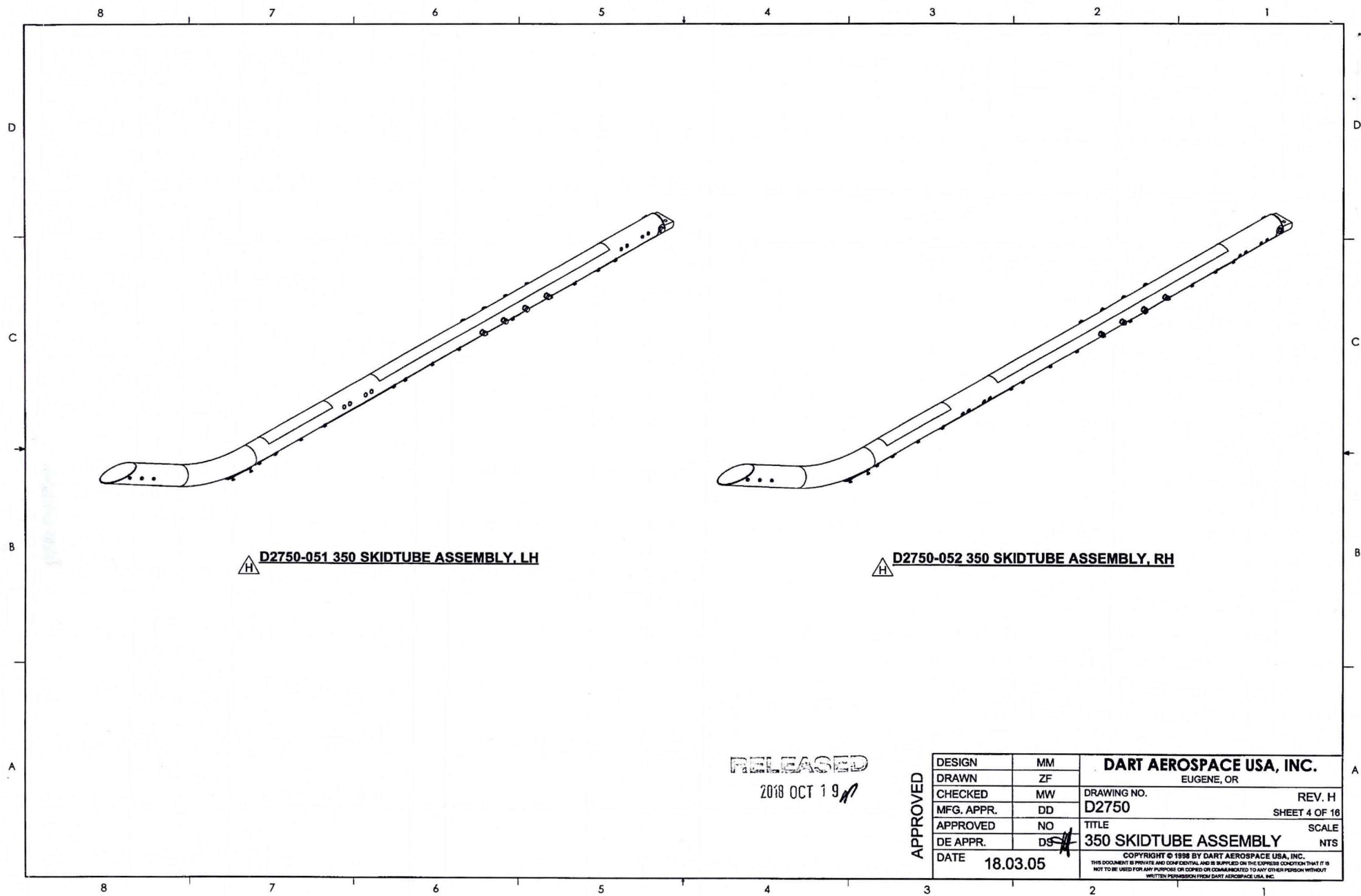


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



D2750-051 350 SKIDTUBE ASSEMBLY, LH

D2750-052 350 SKIDTUBE ASSEMBLY, RH

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2018 OCT 19

APPROVED	DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
	DRAWN	ZF		
	CHECKED	MW	DRAWING NO.	REV. H
	MFG. APPR.	DD	D2750	SHEET 4 OF 18
	APPROVED	NO	TITLE	SCALE
	DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
	DATE	18.03.05	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Entered: _____ Date: _____

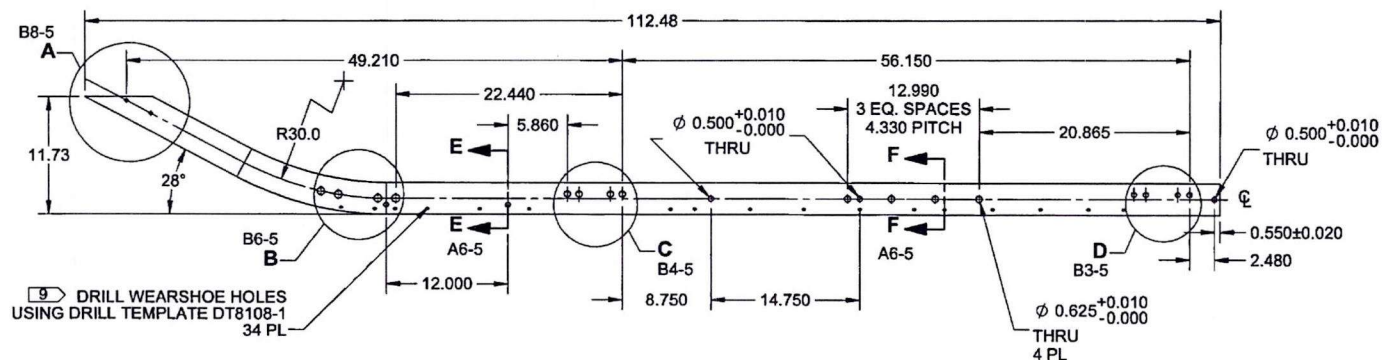


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

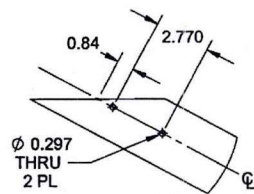
NCR No. _____

Route update only ☐

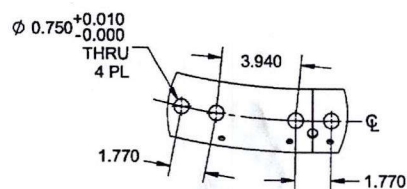
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



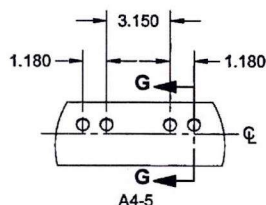
D2750-1 LH SKIDTUBE



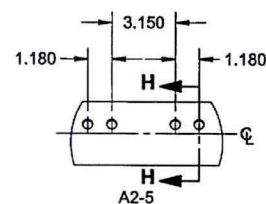
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SCALE 2X



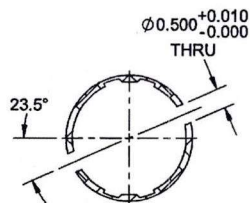
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SCALE 2X



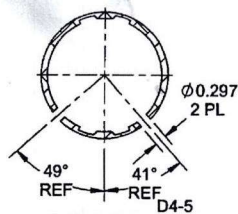
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SCALE 2X



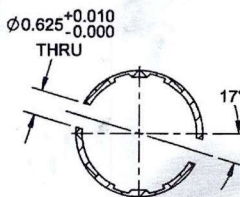
DETAIL D
SCALE 2X



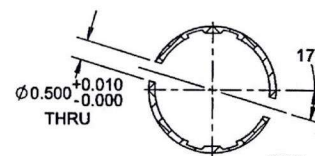
SECTION E-E
SCALE 4X, 2 PL



SECTION F-F
SCALE 4X, 17 PL



SECTION G-G
SCALE 4X, 4 PL



SECTION H-H
SCALE 4X, 4 PL

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2010 OCT 19

DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO. D2750	REV. H
MFG. APPR.	DD	SHEET 5 OF 16	
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	
DATE	18.03.05	NTS	

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Entered: _____ Date: _____

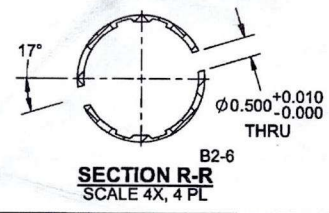
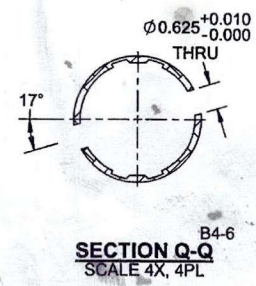
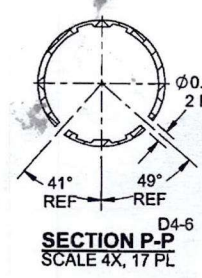
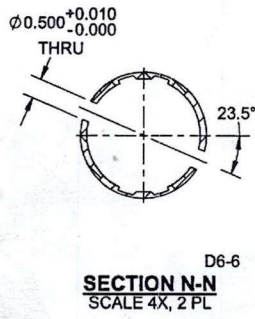
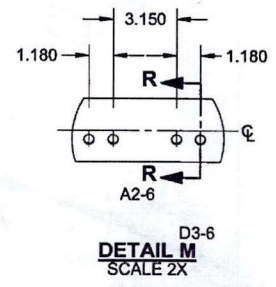
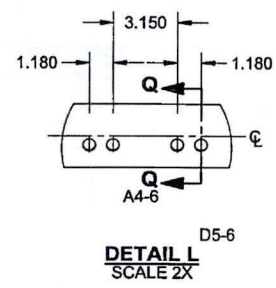
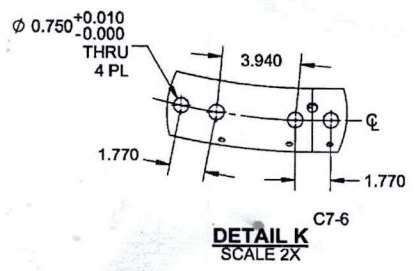
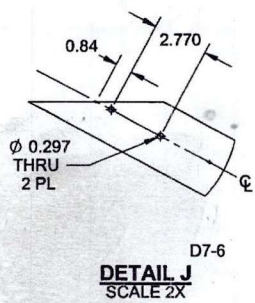
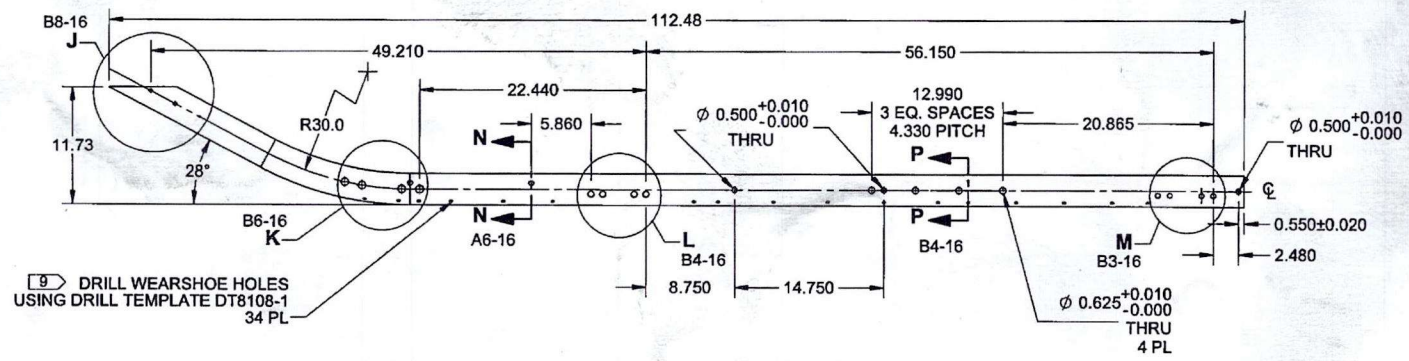


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only ☐

NCR No. _____

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



RELEASED
2018 OCT 19

APPROVED	DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
	DRAWN	ZF		
	CHECKED	MW	DRAWING NO. D2750	REV. H
	MFG. APPR.	DD	SHEET 6 OF 16	
	APPROVED	NO	TITLE	SCALE
	DE APPR.	DS	350 SKIDTUBE ASSEMBLY	
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Entered: _____ Date: _____

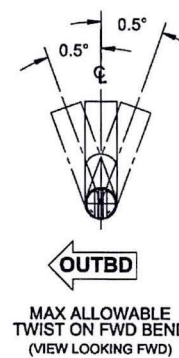
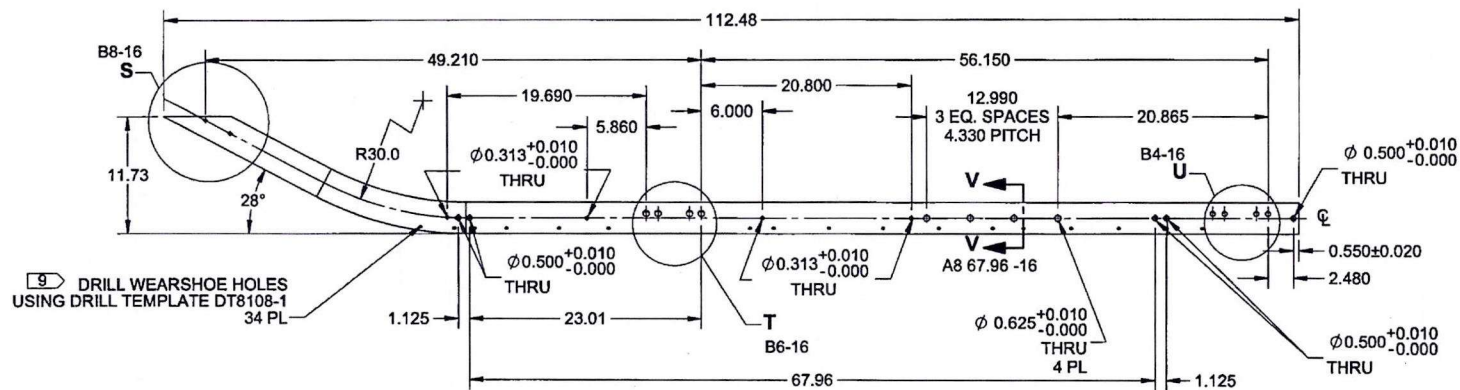


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

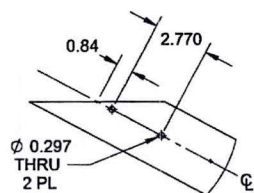
NCR No. _____

Route update only ☐

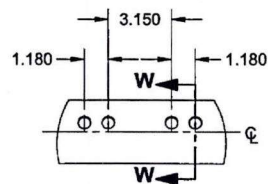
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



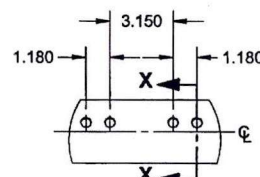
D2750-3 LH SKIDTUBE



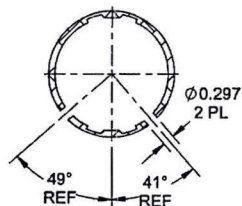
DETAIL S
SCALE 2X



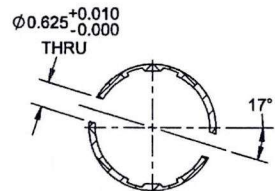
DETAIL T
SCALE 2X



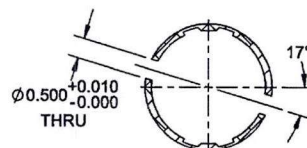
DETAIL U
SCALE 2X



SECTION V-V
SCALE 4X, 17 PL



SECTION W-W
SCALE 4X, 4 PL



SECTION X-X
SCALE 4X, 4 PL

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10:3 OCT 19 97

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DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 7 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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Entered: _____ Date: _____

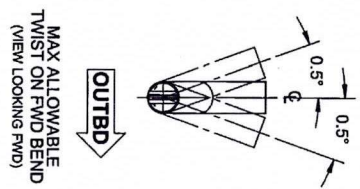
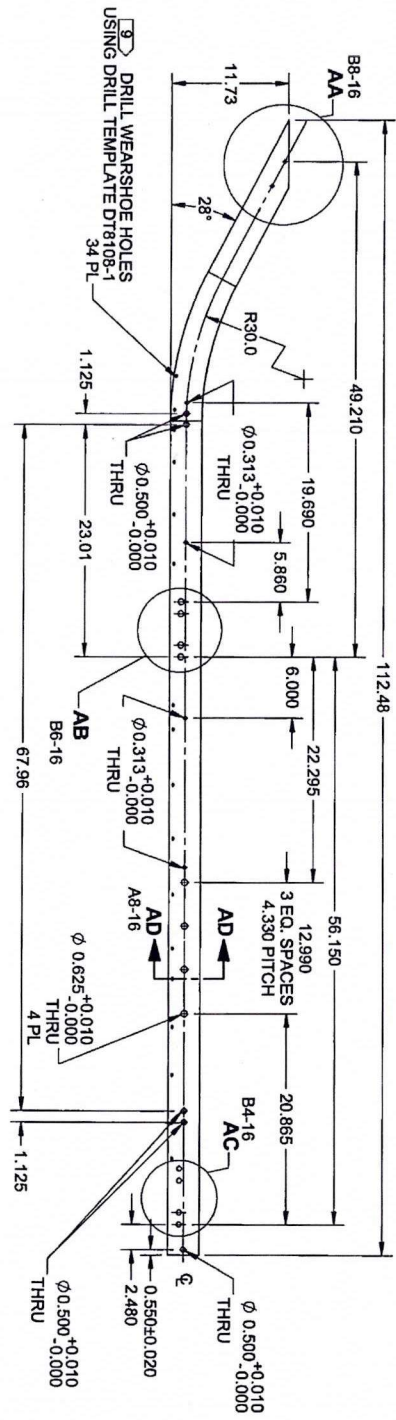


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

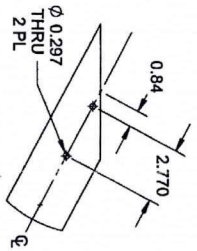
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

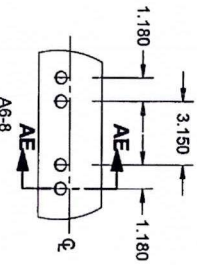


D2750-4 RH SKIDTUBE



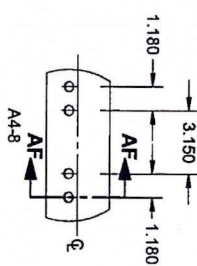
DETAIL AA
SCALE 2X

D7-8



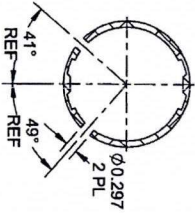
DETAIL AB
SCALE 2X

C5-8



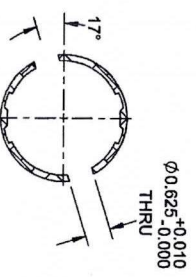
DETAIL AC
SCALE 2X

D3-8



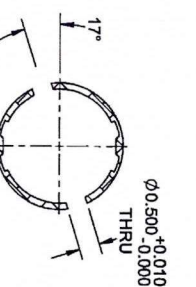
SECTION AD-AD
SCALE 4X, 17 PL

D4-8



SECTION AE-AE
SCALE 4X, 4 PL

B6-8



SECTION AF-AF
SCALE 4X, 4 PL

B4-8

APPROVED

DESIGN	MM	DART AEROSPACE USA, INC.
DRAWN	ZF	EUGENE, OR
CHECKED	MM	
MFG. APPR.	DD	
APPROVED	NO	
DE APPR.	DS	
DATE	18.03.05	
TITLE	350 SKIDTUBE ASSEMBLY	
REV. H	SHEET 8 OF 16	SCALE
NTS		

RELEASED
2018 OCT 19

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Entered: _____ Date: _____

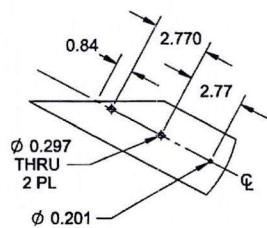
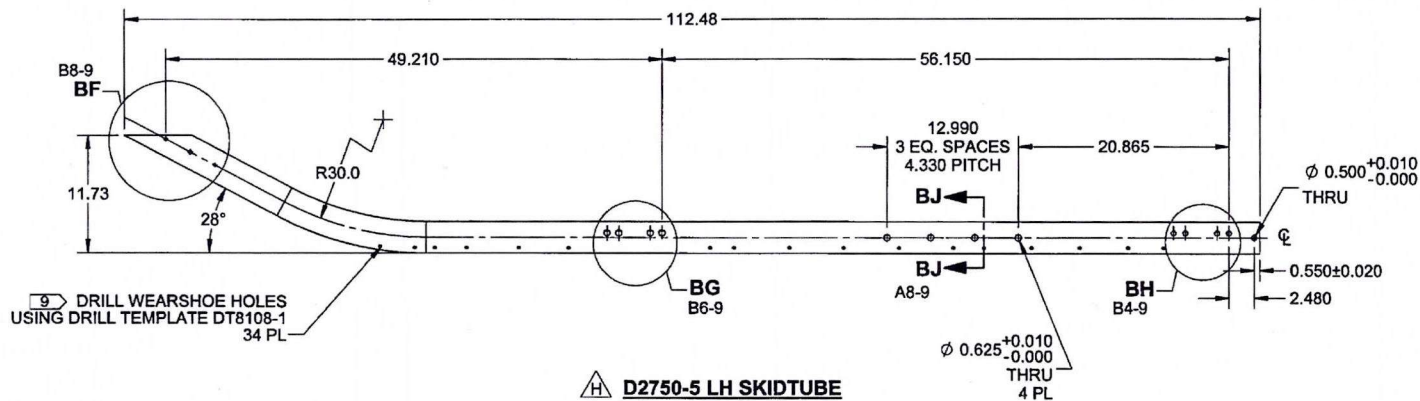


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

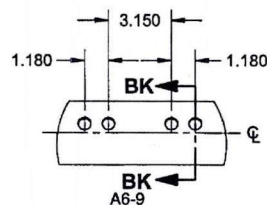
NCR No. _____

Route update only ☐

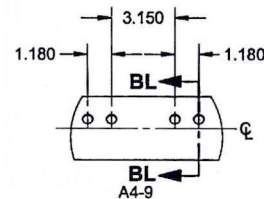
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



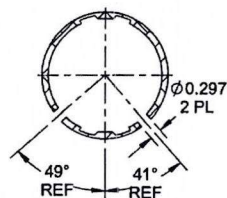
DETAIL BF
SCALE 2X



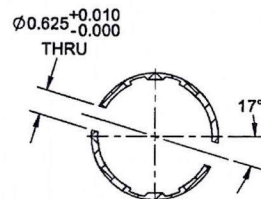
DETAIL BG
SCALE 2X



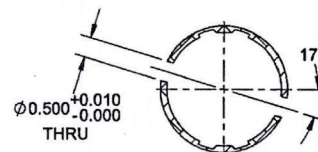
DETAIL BH
SCALE 2X



SECTION BJ-BJ
SCALE 4X, 17 PL



SECTION BK-BK
SCALE 4X, 4 PL



SECTION BL-BL
SCALE 4X, 4 PL

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2019 OCT 19

APPROVED

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 9 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.05	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.	
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Entered: _____ Date: _____

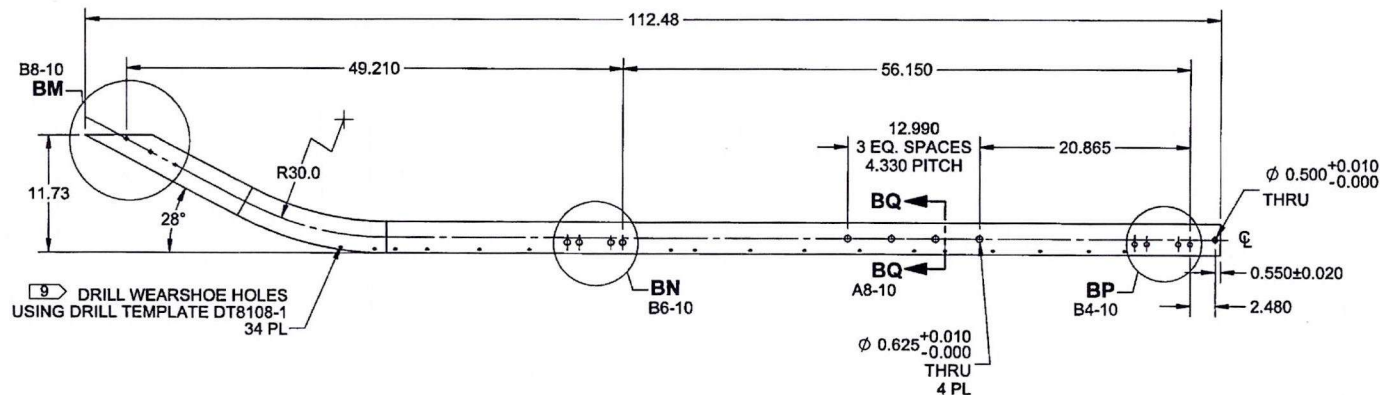


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

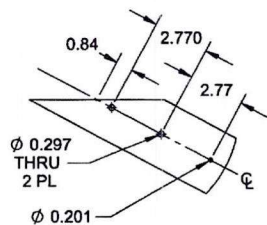
NCR No. _____

Route update only ☐

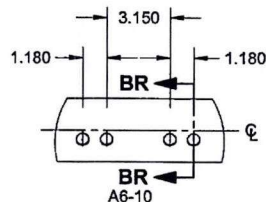
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



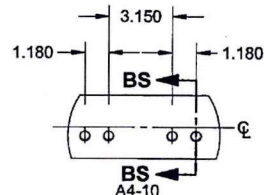
D2750-6 RH SKIDTUBE



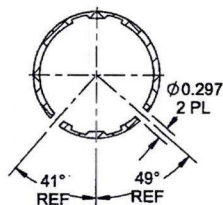
DETAIL BM
SCALE 2X



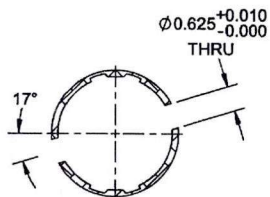
DETAIL BN
SCALE 2X



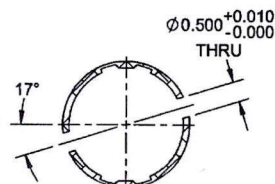
DETAIL BP
SCALE 2X



SECTION BQ-BQ
SCALE 4X, 17 PL



SECTION BR-BR
SCALE 4X, 4 PL



SECTION BS-BS
SCALE 4X, 4 PL

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2019 OCT 19

DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 10 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		Other/Details:			

Entered: _____ Date: _____

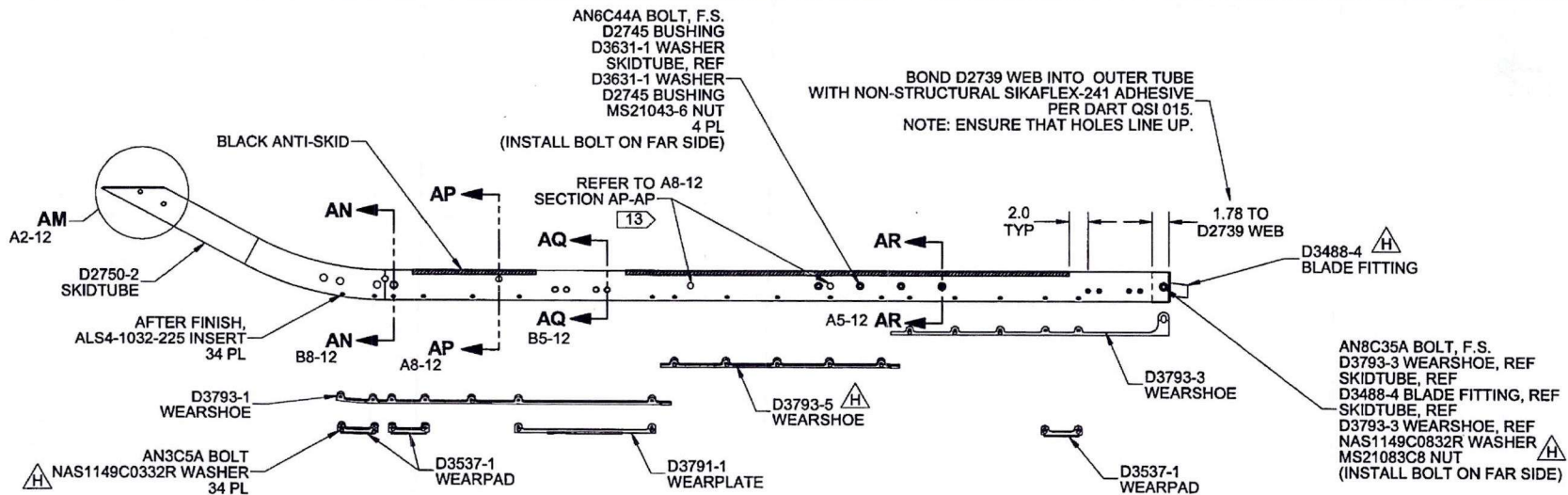


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

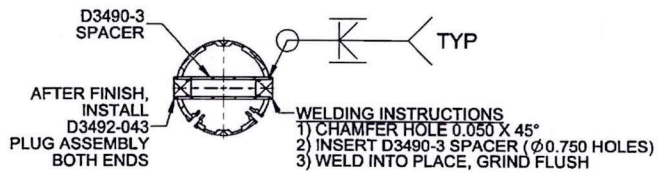
• NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



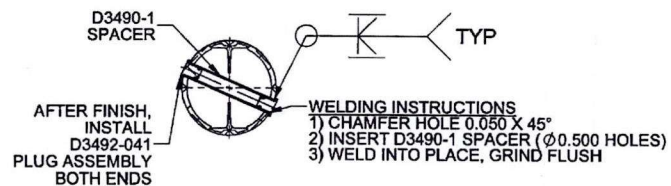
D2750-042 350 SKIDTUBE ASSEMBLY, RH



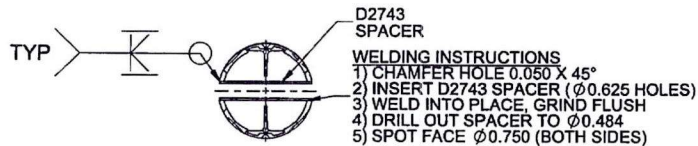
SECTION AN-AN
SCALE 3X, 4 PL



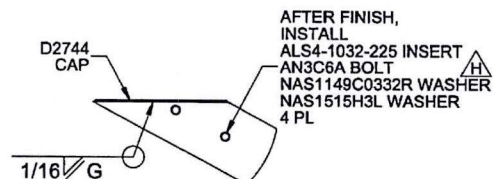
SECTION AQ-AQ
SCALE 3X, 4 PL



SECTION AP-AP
SCALE 3X, 4 PL



SECTION AR-AR
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



DETAIL AM
SCALE 2X

APPROVED	DESIGN	MM	DART AEROSPACE USA, INC.	
	DRAWN	ZF	EUGENE, OR	
	CHECKED	MW	DRAWING NO.	REV. H
	MFG. APPR.	DD	D2750	SHEET 12 OF 16
	APPROVED	NO	TITLE	SCALE
	DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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2018 OCT 19

Entered: _____ Date: _____

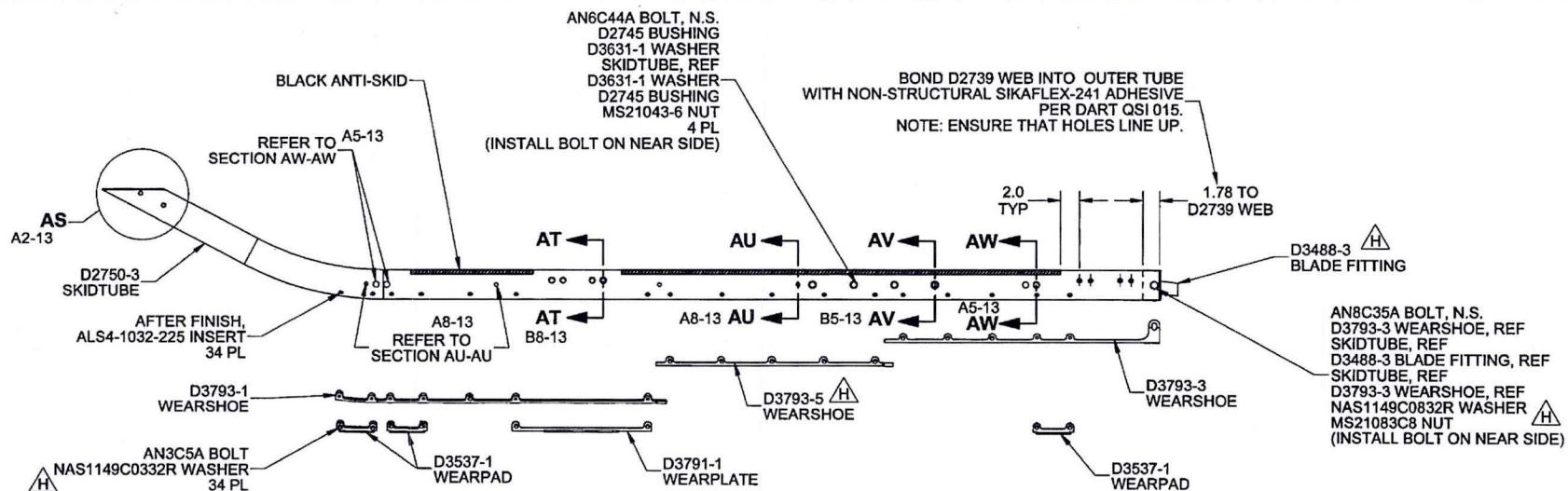


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

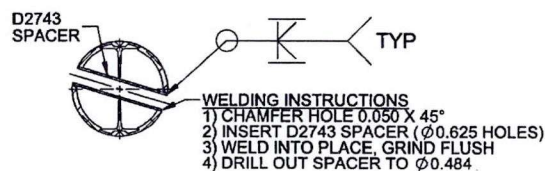
NCR No. _____

Route update only ☐

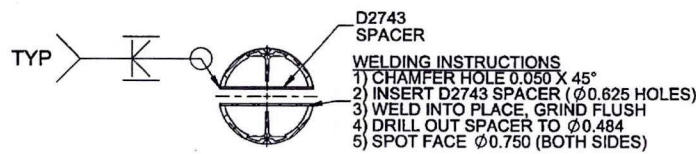
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



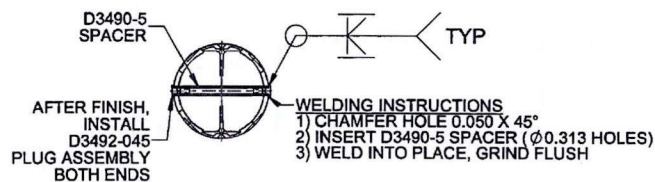
D2750-043 350 SKIDTUBE ASSEMBLY, LH



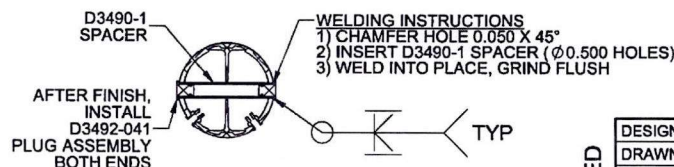
SECTION AT-AT
SCALE 3X, 4 PL



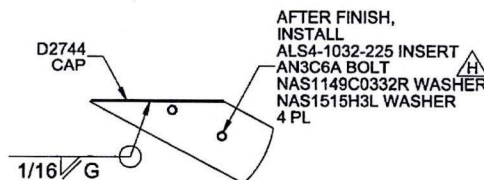
SECTION AV-AV
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



SECTION AU-AU
SCALE 3X, 4 PL



SECTION AW-AW
SCALE 3X, 4 PL



DETAIL AS
SCALE 2X

2010 OCT 19

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 13 OF 1
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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Entered: _____ Date: _____

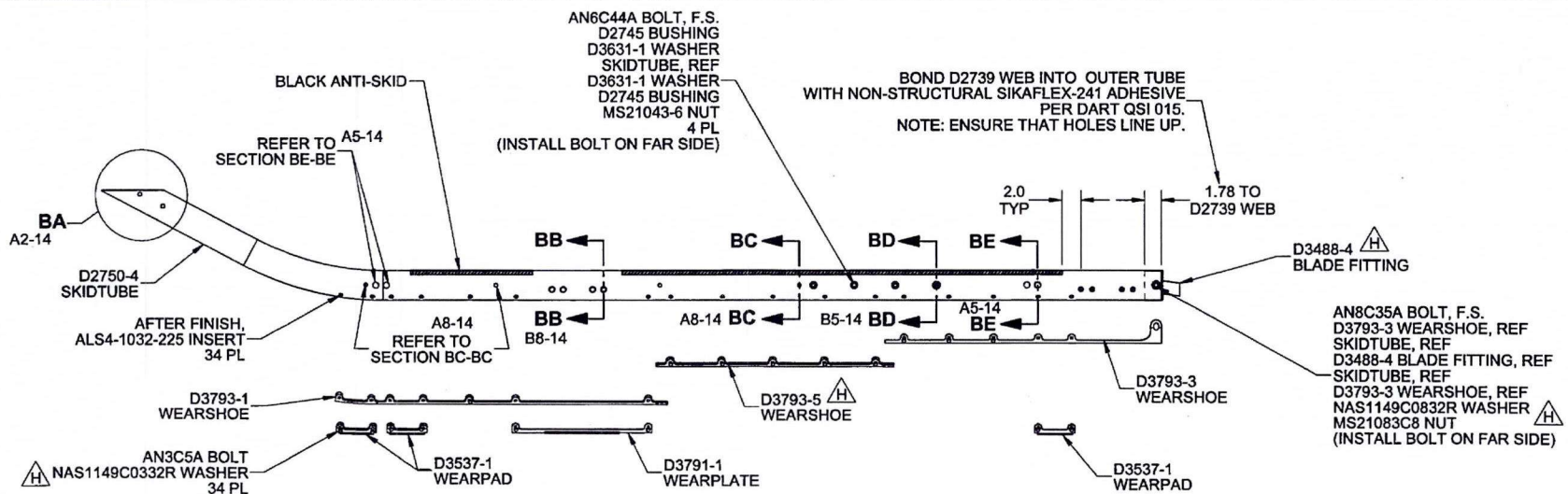


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

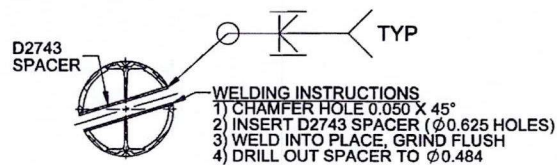
NCR No. _____

Route update only ☐

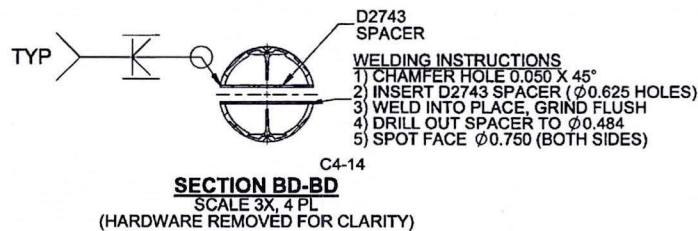
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



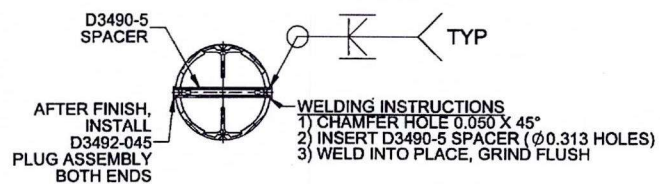
D2750-044 350 SKIDTUBE ASSEMBLY, RH



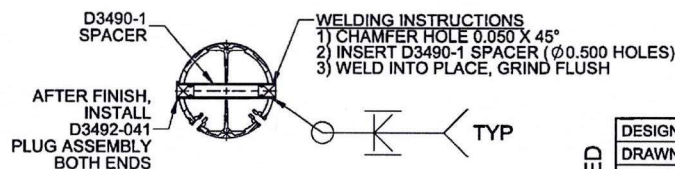
SECTION BB-BB
SCALE 3X, 4 PL



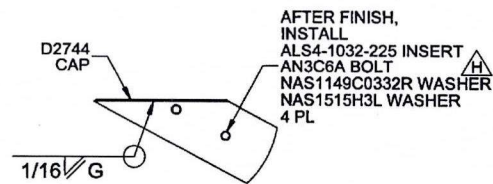
SECTION BD-BD
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



SECTION BC-BC
SCALE 3X, 4 PL



SECTION BE-BE
SCALE 3X, 4 PL



DETAIL BA
SCALE 2X

APPROVED	DESIGN	MM	DART AEROSPACE USA, INC. EUGENE, OR	
	DRAWN	ZF		
	CHECKED	MW	DRAWING NO.	REV. H
	MFG. APPR.	DD	D2750	SHEET 14 OF 16
	APPROVED	NO	TITLE	SCALE
	DE APPR.	D9	350 SKIDTUBE ASSEMBLY	NTS
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2018 OCT 19

Entered: _____ Date: _____

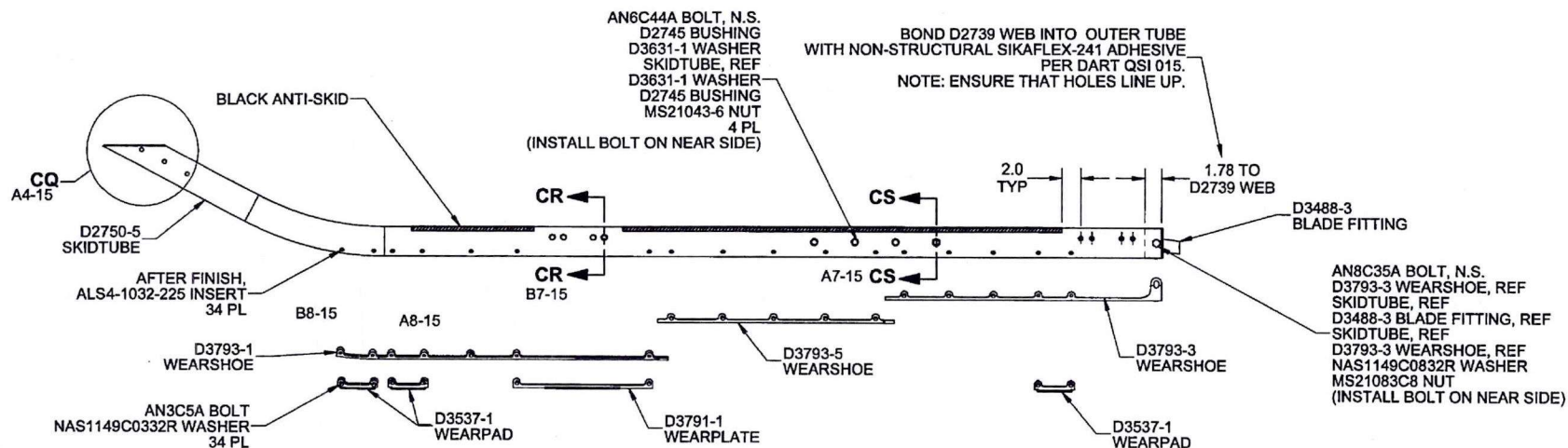


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

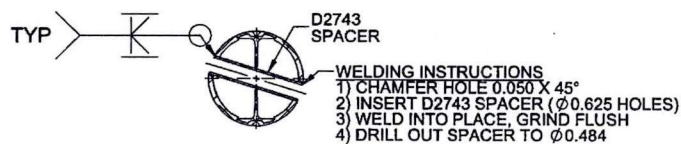
NCR No. _____

Route update only ☐

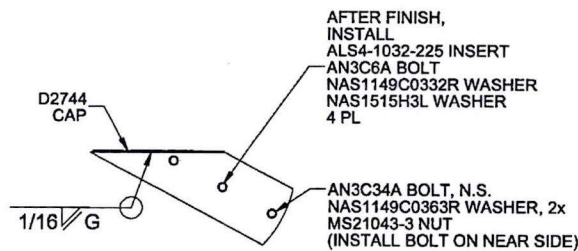
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



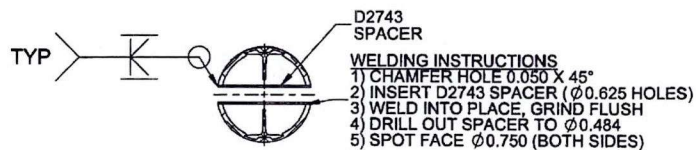
D2750-051 350 SKIDTUBE ASSEMBLY, LH



SECTION CR-CR SCALE 3X, 4 PL



DETAIL CQ SCALE 2X



SECTION CS-CS SCALE 3X, 4 PL (HARDWARE REMOVED FOR CLARITY)

APPROVED

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. H
MFG. APPR.	DD	D2750	SHEET 15 OF 18
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.05	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Entered: _____ Date: _____

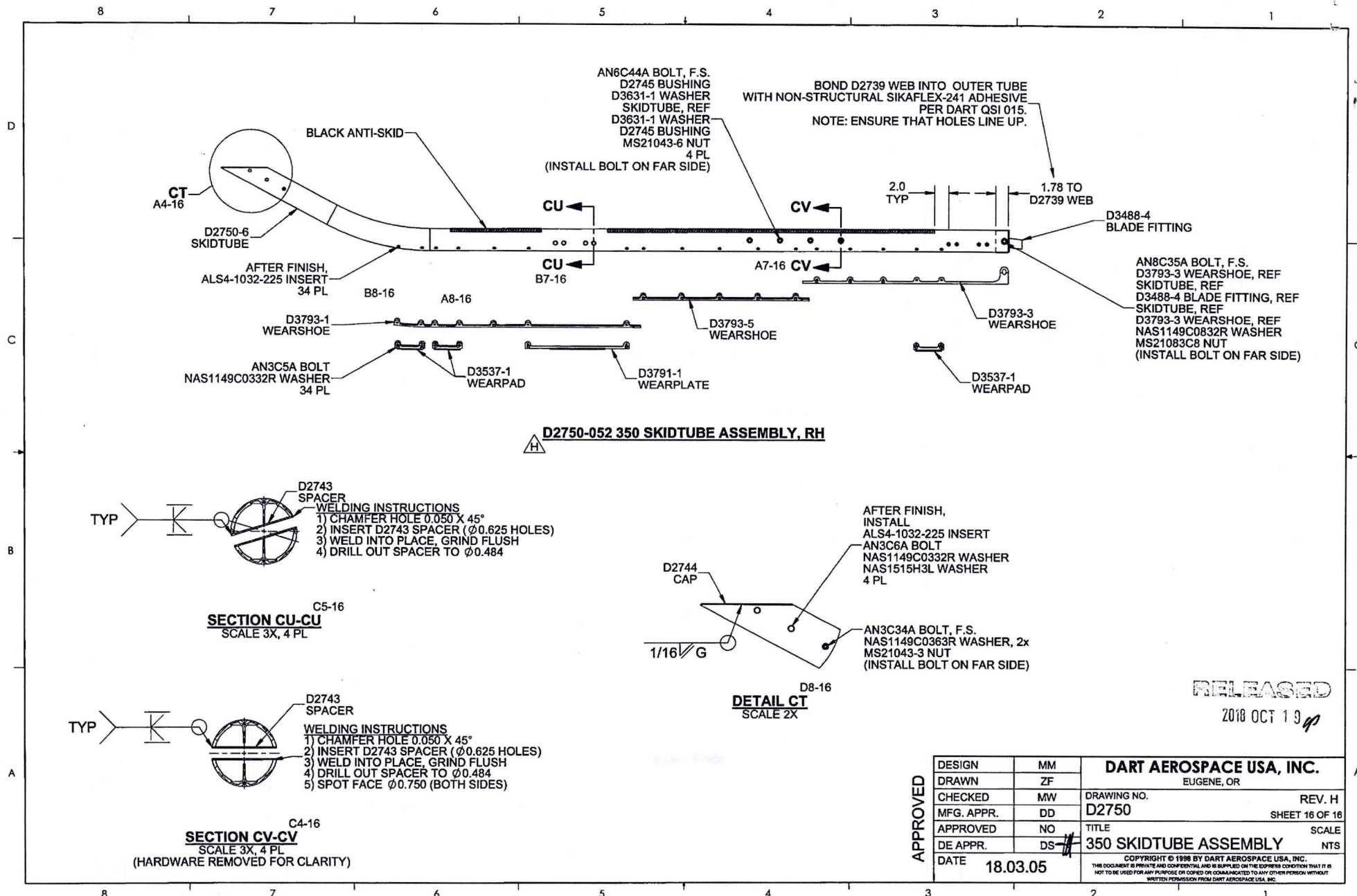


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only ☐

NCR No. _____

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QS1042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details: _____					